

The country surrounding Lake Maranacook is exceedingly beautiful in its scenic character, and intensely interesting botanically. The woodlands are rich with the accumulation of vegetable mold in which the ferns and other plants luxuriate. On the Winthrop side there are some very dense cedar swamps which I did not get time to explore. The altitude of the lake itself is five hundred feet above sea level, and that of the surrounding country of course still greater.

#### PLANTS FROM THE EASTERN SLOPE OF MT. EQUINOX.

MARY A. DAY.

IN the year 1898 my sister and I spent a large part of the summer in Manchester, Vermont. This place is situated in the southwestern part of the state, at the base of Mt. Equinox, and is surrounded by mountains of the Equinox and Green Mountain ranges. The soil is sandy, with limestone and marble ledges on the mountains. We were located on the eastern slope of Mt. Equinox, at an elevation of about twelve hundred feet, while the mountain itself rose to nearly four thousand feet. In the vicinity we made a collection of plants, of which some had not before been recorded from Vermont, and others, although reported from a few stations, appear to be rare and local in the state. The collection numbered about thirty-two hundred specimens, which were determined at the Gray Herbarium, and distributed in sets to the leading herbaria of this country. The forms marked with an asterisk are not reported from Vermont in Perkins' latest catalogue.

Among the rarer plants by roadside and in open fields near the highway we found \**Brassica juncea*, Cosson, *Erysimum cheiranthoides*, L., *Geum strictum*, Ait., \**Prunus avium*, L., \**Agrimonia Brittoniana*, Bicknell, \**A. hirsuta*, Bicknell, \**Galium palustre*, L., *Aster ericoides*, var. *Pringlei*, Gray, *A. tardiflorus*, L., *Prenanthes alba*, L., \**Solidago canadensis*, var. *procera*, Gray, *Solidago patula*, Muhl., \**Lophanthus scrophulariaefolius*, var. *mollis*, Fernald,<sup>1</sup> *Phryma leptostachya*, L., \**Polygonum*

<sup>1</sup> LOPHANTHUS SCROPHULARIAEFOLIUS, Benth., var. **mollis**, Fernald, n. var. "Stems densely soft-tomentose; leaves pale beneath with dense short tomentulose hairs, less pubescent above.—Dry thicket, Dorset, Vermont, July 20, 1898, *Mary A. Day*, no. 332; Cincinnati, Ohio, 1839, *J. G. Lea*; Marion County, Illinois, *M. S. Bebb*; Illinois, without definite station, *S. B. Mead*.—In its pale color and dense pubescence very different from the greener, sparingly pubescent *L. scrophulariaefolius*, and, when compared with the extreme form of that plant, appearing specifically distinct. Many specimens, however, show such intermediate characters that the two plants can be treated only as varieties of one species."

*ramosissimum*, Michx., *Rumex patientia*, L., *Platanus occidentalis*, L., \**Allium fistulosum*, L., *Typha angustifolia*, L., \**Carex tribuloides*, var. *Bebbii*, Bailey, *C. eburnea*, Boott, and *C. Schweinitzii*, Dewey. Growing on plantain and clover we found the recently introduced \**Cuscuta Epithymum*, Murr., and \**Convolvulus japonica*, Thunb., had established itself near an old flower-garden. \**Physalis heterophylla*, Nees, with its variety \**ambigua*, Rydberg, grew in open fields. The "poison hemlock," *Conium maculatum*, L., was found in several places, but always within a short distance of dwellings. *Euphorbia Helioscopia*, L., had established itself as a weed, and *Chenopodium capitatum*, Wats., reproduced itself year after year in a garden where a plant had been transplanted from the mountain. In dry soil, near a small lake, were *Asclepias tuberosa*, L., and *Gentiana quinqueflora*, L. *Equisetum variegatum*, Schl., grew quite abundantly by a brook near the village. On the lower slope of the mountain was a large, open pasture, having dry, poor soil, but furnishing some interesting plants. Here *Anemone cylindrica*, Gray, and \**Hypericum boreale*, Bicknell (usually of moister habitat), were found, also *Aster ptarmicoides*, Torr. & Gray, \**Blephilia ciliata*, Raf., \**B. hirsuta*, var. *glabrata*, Fernald,<sup>1</sup> *Calamintha Clinopodium*, Benth., and *Monarda fistulosa*, var. *mollis*, Benth.

As we ascended the mountain where the forests commenced, the soil changed from sandy to rich dark earth, and there was a marked difference in the growth of the plants. *Ribes oxycanthoides*, L., and \**R. rubrum*, var. *subglandulosum*, Maxim., were found growing side by side. \**Circaea intermedia*, Ehrh., reported from Maine (RHODORA, i. 102) but not elsewhere from North America, grew here with *C. alpina* and *C. Lutetiana*, L. *Uvularia grandiflora*, Smith, was found sparingly in open places, and *Cystopteris bulbifera*, Bernh., grew abundantly in one locality. An open knoll was covered with *Juniperus Sabina*, var. *procumbens*, Pursh., which formerly had been only doubtfully reported from the state. This was found in two other dry places in great abundance. *Microstylis monophyllos*, Lindl., was also found in these woods. At a higher elevation, near Table Rock, a place of about two thousand

<sup>1</sup> BLEPHILIA HIRSUTA, Benth., var. **glabrata**, Fernald, n. var. "Stems glabrous or minutely puberulent, villous only at the very tips, or with a few scattered long hairs on the angles below; leaves glabrous or very slightly pubescent; head solitary, terminal, or with one or two approximate (not remote) lower ones. — Dry wooded slope of Mt. Equinox, Manchester, Vermont, July 1, 1898, and in dry open pastures, base of Mt. Equinox, July 5, 1898, *Mary A. Day*, nos. 140, 141."

feet altitude, were found *Clematis verticillaris*, DC., *Arabis hirsuta*, Scop., \**Arabis lyrata*, L., \**Rosa acicularis*, Lindl., *Lonicera dioica*, L., *Galium lanceolatum*, Torr., \**Rhododendron canescens*, G. Don, *Hydrophyllum virginicum*, L., *Habenaria Hookeriana*, Torr., *Carex scirpoidea*, Michx., and *Asplenium Ruta-muraria*, L. Higher up on the mountain was *Allium tricoccum*, Ait. In the lower lands we found \**Sanicula trifoliata*, Bicknell, *Aspidium Goldianum*, Hook., and in very wet ground, beside a brook, *Myosotis palustris*, With., and *Gratiola virginiana*, L., while in a marsh was *Scheuchzeria palustris*, L. The grass of Parnassus, *Parnassia caroliniana*, Michx., grew everywhere in the lower damp regions in great abundance.

GRAY HERBARIUM.

### HONEY-GUIDES OF NIGHT BLOOMERS.

E. WILLIAMS HERVEY.

A RECENT writer comparing the colors of a diurnal bloomer having honey-guides, with a white-flowered nocturnal bloomer having no honey-guides, remarks that the latter "has no lines to indicate the whereabouts of its nectar, for these would be undistinguishable in the dark and therefore useless," implying that nocturnal flowers never have honey-guides. In my recently published *Observations on the Colors of Flowers*, I took exception to this statement and cited *Convolvulus sepium* as an example of a flower blooming in the morning twilight. To this example should be added *Datura Tatula*, and *Ipomœa purpurea*, the Morning Glory. The former is of a lavender color outside, and with only a slight tinge of blue within, appearing nearly white. Midway between the top and bottom of the tube, there are fifteen deep-purple, longitudinal lines of about an inch in length, viz., three to each of the five ribs. The flower in August expands between five and six o'clock P.M. and closes early the next morning.

*Ipomœa purpurea* has white, pink, purple and blue varieties; each variety has five stripes or rays running from the border of the limb to the commencement of the tube; the rays are always of a color, or at least of a shade, different from the flower, a white flower usually having pink, and a blue one red-purple rays, etc. A white variety is occasionally seen without any colored markings.

All these different varieties of the flower opened at the same time,